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ABSTRACT

Evidence suggests that tracking of students on the secondary level may not only be discriminatory, but also counterproductive to the personal, educational, and economic potential of all students. The English and Social Studies department of Oak Hill High School, in Wales, Maine, developed an intervention program concerning heterogeneous grouping for the 9th and 10th grades. The school is small, with 400-450 students, and is considered rural or suburban. During the 1988-89 and 1989-90 academic years, the program integrated the mid and upper tracks of students for English and Social Studies classes. Evaluations based on student surveys and faculty observations concluded: (1) students experienced a high degree of self-esteem; (2) teachers perceived that the self-esteem of the mid-level student was elevated; (3) students had a positive perception of the learning environment; (4) staff ability to manipulate the learning environment increased; (5) teachers preferred heterogeneous groups; (6) student level of motivation increased; (7) students took responsibility for their learning; (8) students participated in class activities with a positive perception; (9) teachers diversified and improved teaching strategies; (10) classes became more student-centered, participatory, and interactive; and (11) teachers observed a decrease in the gap between the performance and stigmatized roles of the mid and upper level student. This document contains numerous data tables and a bibliography. (ALL)

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Assessing Student Attitudes Toward Heterogeneous Grouping: A Pilot Study

by
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Introduction

In 1954, the Supreme Court found the concept of "separate but equal education" unconstitutional, yet twenty-five years later discrimination and prejudice continue to exist in American schools in the guise of tracking.

In an effort to effect legitimate classroom-based reform, the English and Social Studies department at Oak Hill High School in Wales, Maine, is in the second year of a program and intervention concerning heterogeneous grouping for the 9'th and 10'th grades.

The program at Oak Hill was undertaken as a result of several teachers' and administrators' growing conviction that the practice of tracking is counterproductive to the philosophy and goals of the school. More importantly, tracking may be detrimental to the needs of students as they approach the workplace of the 21'st century.

A growing body of research indicates that tracking neither meets the educational needs of high or low ability students, nor does it adequately prepare students for entry into the untracked world of higher education or employment. While the results discussed in this report do not indicate any findings concerning achievement, these results do point toward student acceptance of heterogeneous grouping as a viable educational strategy.

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Review of the literature

In reviewing the relevant research-based literature on ability grouping, i.e., tracking, in high schools, we found support for many of our initial concerns about the detrimental effects of tracking. Our original impetus for the exploration of change was derived from materials published by Slavin (1987), Oakes (1985), Kulik and Kulik, (1985, 1984), and Goodlad (1984). Each of these researchers in some way points to the deficiencies in student learning and self-esteem in tracked classrooms and schools.

These studies suggest that tracking not only engenders inequality in student opportunity, but also fails to benefit any one group of students. Our particular focus was the general or mid-level student in our pursuit of this educational intervention.

Concerns relevant to the issue of tracking addressed in our survey instruments will be addressed in the Discussion and Implications sections of this paper. We will discuss our pilot project in relationship to the judgments made by Braddock and McPartland (1990) as to the negative repercussions of tracking. Braddock and McPartland listed those negative repercussions as follows:

1. A concern that the tracked school provides a weaker learning environment for the lower tracked student.

2. A lowering of expectations and subsequent stigmatization of the lower tracked student as well as major deficiencies in curriculum implementation for that student.

3. A significant widening of the gap between students in the top and bottom tracks over time, coupled with student inability to move vertically out of lower and into higher tracks.

4. Discrimination against socioeconomic classes as a natural outgrowth of inequity in educational opportunity.

Other studies, notably Dawson (1987), detail the advantages of non-tracked classes and corroborate our positive perceptions of heterogeneous grouping. These benefits include:

1. Both low- and high-achieving students perform better in mixed classes.
2. Students self-concept and self-esteem are not enhanced in ability-grouped classes.
3. Educational opportunities and career options are limited for lower tracked students.
4. When multidimensional learning environments are provided, self-esteem in the lower ability students is enhanced.

Dawson is not alone in these perceptions. Other articles reviewed support these same views.

While the data collected at Oak Hill High School over the past two years begins to suggest the viability of these contentions, a tremendous body of literature supports our endeavors to create a more equitable learning environment in an otherwise rather traditional setting. Evidence exists to suggest that tracking on the secondary level may be not only discriminatory, but also counterproductive to the personal, educational, and economic potential of all students.

Background

Oak Hill High School is a small rural high school located in central Maine with a student population of 400-440 grade 9-12 students. The school is located 10-25 miles equidistantly from three population areas, Brunswick, Lewiston, and Augusta. Three separate towns, Litchfield, Sabattus, and Wales, combined to form a community school district in 1976.

Today, the student population might be characterized as rural/suburban. As with many rural areas, however, these students' career aspirations are limited both by their environment as well as their parents' socioeconomic status. The local mill-related economy had for years offered many careers for low-skilled workers and provided for a reasonable standard of living for those workers. As the demand for unskilled labor dwindles both regionally and nationally, however, it is incumbent upon us to address the issue of career aspirations and, more practically, to provide students with a secondary education which will prepare them to enter an increasingly skilled work force.

The curriculum for the school has essentially been a tracked curriculum based on ability assessment done in the eighth grade. Students are assessed in the eighth grade using a combination of scores based on Maine Educational Assessments, grades, and teacher recommendations. Students are then grouped into low (10 level), middle (20 level), and high (30 level) classes for most subjects. This tracking methodology produces peer groups within the school which may be determined by socioeconomic standing as well as academic ability. In many ways this grouping tends to produce a system of socioeconomic segregation. In a small high school with limited scheduling resources, this has further tended to produce tracked schedules as well.

In the fall of 1987, the English, Social Studies and Foreign Language department began a discussion concerning the impact and desirability of the process and procedure of tracking students. The discussion continued throughout the year among the ten department members. A teacher in the math department had successfully used cooperative learning techniques and recommended some of these techniques as appropriate for heterogeneously grouped classes. The principal supported heterogeneously-based grouping. From this generalized process of discussion and observation, and from a mounting concern that the current system would not provide adequate education to meet student needs, the department reached a consensus about a program in grouping to begin during the 1988-1989 academic year.

The parameters of the program were as follows:

1. Students in grade 9 and grade 10 would be grouped heterogeneously in English and in the grade 9 Social Studies programs for 20 and 30 level classes.

2. Students in grade 9 and grade 10 would be grouped homogeneously in English and in the grade 9 Social Studies programs for the 10 level classes.

3. Students in the grade 9 English and Social Studies program would be scheduled in a manner that allowed for blocked time in order that those teachers work cooperatively in both disciplines.

4. Cooperative education and techniques of group work would be used within all classrooms when appropriate. Teacher training time would be provided to English and Social Studies teachers during the summer of 1988 in order that curriculum revisions could be made and appropriate practices developed.

5. The program would be conducted over a two-year period.

6. Appropriate evaluation of the program would be conducted throughout the two-year period.

It is appropriate at this time to make some observations and conclusions about cooperation. One vital strength of the department as a whole is its ability to work cooperatively while sharing differences. This is as much a function of practicality as philosophy. The school's small size and the large number of class offerings force teachers to prepare many different classes each day. Because the school is functioning at optimum capacity, most classrooms in the department function as the home base for at least two teachers. Consequently, overcrowding forces teachers to move in class location almost as often as students, and few teachers enjoy the luxury of teaching all classes in one room. A further contributing factor may be the importance placed on team teaching practices and situations. Space constraints, schedule demands, and enlightened self-interest have all contributed to encourage the department to realize the benefits of sharing. It might be suggested that the findings of the survey may be due in part to the collegiality of the department, and while this is a vital concern, not all teaching strategies explored are always shared.

This intervention in grouping represents a somewhat radical departure from the norm of the school and the surrounding community environment. The largely conservative school community, including the school committee, were addressed concerning this change on repeated occasions. The superintendent needed to be convinced that such a change might improve teaching and learning. Students as well, who conceive of academic ability levels as a kind of territory of intellectual privilege, also needed to be made aware of the goals of the project. The political and social nature of the change represents a departure from traditional assumptions and practices.

The willingness of the department to begin a program like this and actively engage in the staff training necessary to complete this initial implementation represents admirable professionalism. Staff training was held during the summer of 1988. Curriculum revisions, which included overhaul of the fundamental goals and objectives of the curriculum, were made and implemented. Special sessions were held on grouping practices and strategies; guest speakers and other teachers helped departmental members focus on the benefits of cooperative learning and heterogeneous grouping and what might be accomplished through such a program. Teachers received compensation and in-service credit for their work.

Methodology and Results

In an effort to monitor student response to the program being developed, the department developed and gave two related but different survey instruments. The first instrument was given at the end of the fall semester, and the second instrument was given at the end of the spring semester. Because of the voluminous data gathered over the two year period of survey data collection, only the results from the spring survey are reported in this paper. Results of the fall survey are available for discussion; however the people involved in the evaluation of the program felt that the survey instrument given at the end of the spring semester more correctly reflects actual practice.

Each question of the survey delivered in the spring of the two-year sequence year is presented and results for the three groups of the sub-populations are presented in percentage format directly beneath the question. In this way, comparisons can be made between groups. All results are reported in percentage frequencies of response, and are identified for the year in which the survey was taken. Due to conservative rounding, percentages may not equal 100%.

The questionnaire was divided into four parts. Part one consisted of eight statements which asked students for their responses on matters of class concerns. Part two consisted of nine dichotomous response questions (yes-no) which again related to concerns with the pedagogy and student opinion of the class, and student response and responsibility toward the class. Part three presented two sets of forced choice options which asked students to rate the frequency of lesson plan organization and class activities according to the most frequent use and the most desired use. It was the intention of the questionnaire in this third section to be able to compare student perceptions concerning actual frequency and desired frequency of activities. Part four of the questionnaire asked students for written opinions concerning the most and least liked activities of the second semester.

A copy of the actual instrument used to gather this information is addended to the report.

Part I:

Question 1: The degree to which you took responsibility for your learning.

		Lo				Hi
Response Levels		1	2	3	4	5
Social Studies	(1988-1989)	5	15	26	41	12
	(1989-1990)	4	4	33	34	25
English I	(1988-1989)	1	8	36	47	8
	(1989-1990)	4	4	27	37	27
English II	(1988-1989)	4	8	36	36	14
	(1989-1990)	5	7	23	42	22

Question 2: The degree to which you felt the teacher was fair in the evaluation of your work.

		Lo				Hi
Response Levels		1	2	3	4	5
Social Studies	(1988-1989)	7	3	20	44	25
	(1989-1990)	3	7	19	23	47
English I	(1988-1989)	1	3	19	35	40
	(1989-1990)	1	5	9	37	47
English II	(1988-1989)	3	6	18	31	41
	(1989-1990)	4	5	17	30	42

Question 3: The degree to which you felt the teacher cared about the students in the class room.

Response Levels		Lo 1	2	3	4	Hi 5
Social Studies	(1988-1989)	3	5	9	43	38
	(1989-1990)	3	4	20	22	49
English I	(1988-1989)	2	5	16	25	52
	(1989-1990)	0	6	11	23	58
English II	(1988-1989)	1	3	16	14	64
	(1989-1990)	4	5	17	12	60

Question 4: The degree to which you felt the tests were fair and based on work done in the class.

Response Levels		Lo 1	2	3	4	Hi 5
Social Studies	(1988-1989)	8	1	18	39	32
	(1989-1990)	5	5	11	31	41
English I	(1988-1989)	1	5	9	44	39
	(1989-1990)	0	4	17	37	40
English II	(1988-1989)	4	4	20	33	38
	(1989-1990)	1	4	14	23	56

Question 5: The degree to which you think you participated in the class room activities.

Response Levels		Lo 1	2	3	4	Hi 5
Social Studies	(1988-1989)	3	11	37	33	14
	(1989-1990)	6	9	22	39	24
English I	(1988-1989)	1	8	32	38	19
	(1989-1990)	1	4	32	37	24
English II	(1988-1989)	2	10	12	50	24
	(1989-1990)	4	8	15	48	23

Question 6: The degree to which the teacher demonstrated knowledge of the subject matter.

Response Levels		Lo 1	2	3	4	Hi 5
Social Studies	(1988-1989)	5	0	9	45	39
	(1989-1990)	3	6	18	26	47
English I	(1988-1989)	0	5	7	49	38
	(1989-1990)	1	6	9	23	61
English II	(1988-1989)	3	2	6	40	48
	(1989-1990)	5	2	10	24	59

Question 7: The degree to which you think you can handle independent project time and group work - the times when the teacher is not in direct control.

Response Levels		Lo 1	2	3	4	Hi 5
Social Studies	(1988-1989)	3	13	21	35	29
	(1989-1990)	3	3	17	41	34
English I	(1988-1989)	0	10	23	38	28
	(1989-1990)	0	7	18	35	39
English II	(1988-1989)	0	0	27	40	32
	(1989-1990)	1	7	20	41	28

Question 8: The degree to which you felt the class worked well together in groups or in group situations. In other words, was the group time valuable?

Response Levels		Lo 1	2	3	4	Hi 5
Social Studies	(1988-1989)	7	13	17	36	26
	(1989-1990)	8	7	20	31	32
English I	(1988-1989)	5	5	17	38	33
	(1989-1990)	2	3	26	35	32
English II	(1988-1989)	4	9	25	30	31
	(1989-1990)	7	10	22	34	25

Part II:

Question 1: I enjoyed the format of the class as it was structured.

Response		YES	NO
Social Studies	(1988-1989)	66	33
	(1989-1990)	73	26
English I	(1988-1989)	82	17
	(1989-1990)	74	26
English II	(1988-1989)	71	28
	(1989-1990)	68	31

Question 2: The teacher made the expectations of the class clear.

Response		YES	NO
Social Studies	(1988-1989)	90	10
	(1989-1990)	84	15
English I	(1988-1989)	92	7
	(1989-1990)	84	15
English II	(1988-1989)	87	12
	(1989-1990)	80	19

Question 3: Papers were graded and returned promptly.

Response		YES	NO
Social Studies	(1988-1989)	52	48
	(1989-1990)	65	35
English I	(1988-1989)	67	32
	(1989-1990)	76	23
English II	(1988-1989)	50	50
	(1989-1990)	77	23

Question 4: I read the assigned material.

Response		YES	NO
Social Studies	(1988-1989)	57	42
	(1989-1990)	63	36
English I	(1988-1989)	67	32
	(1989-1990)	68	31
English II	(1988-1989)	72	27
	(1989-1990)	76	23

Question 5: The degree to which you think you participated in the class and the class room activities.

Response		YES	NO
Social Studies	(1988-1990)	90	9
	(1989-1990)	92	7
English I	(1988-1989)	84	16
	(1989-1990)	92	7
English II	(1988-1989)	89	10
	(1989-1990)	85	14

Question 6: The teacher varied the classroom teaching techniques.

Response		YES	NO
Social Studies	(1988-1989)	55	44
	(1989-1990)	77	23
English I	(1988-1989)	87	12
	(1989-1990)	80	19
English II	(1988-1989)	84	15
	(1989-1990)	60	40

Question 7: I felt that I belonged as a part of the class and the group to which I belonged.

Response		YES	NO
Social Studies	(1988-1989)	73	26
	(1989-1990)	82	17
English I	(1988-1989)	85	14
	(1989-1990)	83	16
English II	(1988-1989)	80	19
	(1989-1990)	82	18

Question 8: I felt that the material we learned was valuable and relevant.

Response		YES	NO
Social Studies	(1988=1989)	58	41
	(1989-1990)	62	38
English I	(1988-1989)	70	29
	(1989-1990)	75	24
English II	(1988-1989)	60	39
	(1988-1990)	63	36

Question 9: The teacher used the same techniques every day.

Response		YES	NO
Social Studies	(1988-1989)	55	44
	(1989-1990)	35	64
English I	(1988-1989)	23	76
	(1989-1990)	18	82
English II	(1988-1989)	22	77
	(1989-1990)	37	62

Part III: The instructions for question 1 and 2 of this part were as follows:

1. Which of the following activities or classroom styles did you find were most often used in the classroom? Choose only the two most frequently used methods - Use a "1" for the most frequently used method and a "2" for the second most frequently used method. Make only two choices.

2. Which of the following classroom learning styles or activities do you most prefer? Use a "1" for the most preferred method and a "2" for the second most preferred method. Make only two choices.

In order to most efficiently report the results from this question, both actual counts and percentages in parenthesis will be given for each of the sub-populations. Each section of the reporting has been labeled for each sub-group under consideration. In order to facilitate comparisons between the most used strategies and student preference, responses for each question will be presented for each subpopulation.

For Social Studies - Most Frequently Used

		Choice 1	Choice 2	Totals
Lecture	(1988-1989)	19 (23%)	6 (8%)	25 (31%)
	(1989-1990)	47 (24%)	14 (7%)	61 (32%)
Classroom discussion	(1988-1989)	17 (21%)	15 (18%)	32 (40%)
	(1989-1990)	29 (15%)	28 (15%)	57 (30%)
Small group discussion	(1988-1989)	0	4 (5%)	4 (5%)
	(1989-1990)	6 (3%)	9 (5%)	15 (8%)
Small group work on worksheets/questions	(1988-1989)	4 (5%)	2 (2%)	6 (8%)
	(1989-1990)	8 (4%)	20 (10%)	28 (15%)
Team teaching	(1988-1989)	0	1 (1%)	1 (1%)
	(1988-1989)	1 (1%)	4 (2%)	5 (3%)
Student presentations	(1988-1989)	0	0	0
	(1989-1990)	0	3 (2%)	3 (2%)
Individual Work	(1988-1989)	0	9 (11%)	9 (11%)
	(1989-1990)	4 (2%)	12 (6%)	16 (8%)
Self instruction	(1988-1989)	1 (1%)	0	1 (1%)
	(1989-1990)	0	4 (2%)	4 (2%)
Other	(1988-1989)	0	0	0
	(1989-1990)	2 (1%)	1 (1%)	3 (2%)

For Social Studies - Most Preferred

		Choice 1	Choice 2	Totals
Lecture	(1988-1989)	0	4 (4%)	4 (4%)
	(1989-1990)	9 (5%)	9 (5%)	18 (10%)
Classroom discussion	(1988-1989)	29 (32%)	2 (2%)	31 (34%)
	(1989-1990)	34 (18%)	20 (11%)	54 (29%)
Small group discussion	(1988-1989)	3 (3%)	3 (3%)	6 (7%)
	(1989-1990)	19 (10%)	10 (5%)	29 (16%)
Small group work on worksheets/questions	(1988-1989)	4 (4%)	14 (17%)	18 (22%)
	(1989-1990)	19 (10%)	16 (9%)	35 (19%)
Team teaching	(1988-1989)	2 (2%)	2 (2%)	4 (5%)
	(1989-1990)	3 (2%)	7 (4%)	10 (5%)
Student presentations	(1988-1989)	1 (1%)	3 (3%)	4 (5%)
	(1989-1990)	3 (2%)	8 (4%)	11 (6%)
Individual Work	(1988-1989)	1 (1%)	9 (11%)	10 (12%)
	(1989-1990)	3 (2%)	13 (7%)	16 (9%)
Self instruction	(1988-1989)	0	4 (4%)	4 (4%)
	(1989-1990)	2 (1%)	7 (4%)	9 (5%)
Other	(1988-1989)	0	0	0
	(1989-1990)	2 (1%)	1 (1%)	3 (2%)

For English - Most Frequently Used

		Choice 1	Choice 2	Totals
Lecture	(1988-1989)	9 (9%)	2 (2%)	11 (11%)
	(1989-1990)	14 (8%)	16 (9%)	30 (18%)
Classroom discussion	(1988-1989)	24 (24%)	15 (15%)	35 (35%)
	(1989-1990)	54 (32%)	9 (5%)	63 (37%)
Small group discussion	(1988-1989)	6 (6%)	9 (9%)	15 (15%)
	(1989-1990)	4 (2%)	13 (8%)	17 (10%)
Small group work on worksheets/questions	(1988-1989)	9 (9%)	16 (16%)	25 (25%)
	(1989-1990)	4 (2%)	18 (11%)	22 (13%)
Team teaching	(1988-1989)	2 (2%	1 (1%)	3 (3%)
	(1989-1990)	4 (2%)	6 (4%)	10 (6%)
Student presentations	(1988-1989)	0	2 (2%)	2 (2%)
	(1989-1990)	3 (2%)	3 (2%)	6 (4%)
Individual Work	(1988-1989)	1 (1%)	5 (5%)	6 (6%)
	(1989-1990)	1 (1%)	16 (9%)	17 (10%)
Self instruction	(1988-1989)	2 (2%)	2 (2%)	4 (4%)
	(1989-1990)	1 (1%)	3 (2%)	4 (2%)
Other	(1988-1989)	0	0	0
	(1989-1990)	1 (1%)	0	1 (1%)

For English I - Most Preferred

		Choice 1	Choice 2	Totals
Lecture	(1988-1989)	2 (2%)	4 (4%)	6(6%)
	(1989-1990)	6 (3%)	8 (5%)	14 (8%)
Classroom discussion	(1988-1989)	20 (20%)	11 (11%)	31 (31%)
	(1989-1990)	42 (24%)	20 (11%)	62 (35%)
Small group discussion	(1988-1989)	6 (6%)	14 (14%)	20 (20%)
	(1989-1990)	20 (11%)	10 (6%)	30 (17%)
Small group work on worksheets/questions	(1988-1989)	11 (11%)	9 (9%)	18 (18%)
	(1989-1990)	7 (4%)	14 (8%)	21 (12%)
Team teaching	(1988-1989)	3 (3%)	1 (1%)	4(4%)
	(1989-1990)	4 (2%)	13 (7%)	17 (10%)
Student presentations	(1988-1989)	1 (1%)	1 (1%)	2 (2%)
	(1989-1990)	2 (1%)	14 (8%)	16 (9%)
Individual Work	(1988-1989)	9 (9%)	8 (8%)	17 (17%)
	(1989-1990)	4 (2%)	7 (4%)	11 (6%)
Self instruction	(1988-1989)	1 (1%)	1 (1%)	2 (2%)
	(1989-1990)	0	5 (3%)	5 (3%)
Other	(1988-1989)	0	0	0
	(1989-1990)	0	2	2 (1%)

For English II - Most Frequently Used

		Choice 1	Choice 2	Totals
Lecture	(1988-1989)	25 (17%)	11 (7%)	36 (24%)
	(1989-1990)	15 (12%)	12 (10%)	27 (22%)
Classroom discussion	(1988-1989)	47 (31%)	21 (14%)	68 (46%)
	(1989-1990)	41 (34%)	13 (11%)	54 (44%)
Small group discussion	(1988-1989)	1 (0%)	11 (14%)	12 (8%)
	(1989-1990)	1 (1%)	10 (8%)	11 (9%)
Small group work on worksheets/questions	(1988-1989)	3 (3%)	17 (11%)	20 (13%)
	(1989-1990)	2 (2%)	14 (11%)	16 (13%)
Team teaching	(1988-1989)	2 (1%)	4 (2%)	6 (4%)
	(1989-1990)	1 (1%)	3 (2%)	4 (3%)
Student presentations	(1988-1989)	1 (0%)	2 (1%)	3 (2%)
	(1989-1990)	0	2 (2%)	2 (2%)
Individual Work	(1988-1989)	0	9 (6%)	9 (6%)
	(1989-1990)	2 (2%)	4 (3%)	6 (5%)
Self instruction	(1988-1989)	0	0	0
	(1989-1990)	2 (2%)	0	2 (2%)
Other	(1988-1989)	1	1	2 (1%)
	(1989-1990)	0	0	0

For English II - Most Preferred

		Choice 1	Choice 2	Totals
Lecture	(1988-1989)	6 (4%)	8 (5%)	14 (10%)
	(1989-1990)	3 (2%)	2 (2%)	5 (4%)
Classroom discussion	(1988-1989)	36 (23%)	15 (10%)	51 (32%)
	(1989-1990)	41 (33%)	9 (7%)	50 (40%)
Small group discussion	(1988-1989)	8 (5%)	17 (11%)	25 (16%)
	(1989-1990)	10 (8%)	13 (10%)	23 (19%)
Small group work on worksheets/questions	(1988-1989)	17 (11%)	15 (9%)	32 (21%)
	(1989-1990)	4 (3%)	11 (9%)	15 (12%)
Team teaching	(1988-1989)	3 (1%)	3 (1%)	6 (4%)
	(1989-1990)	1 (1%)	10 (8%)	11 (9%)
Student presentations	(1988-1989)	1 (0%)	3 (1%)	4 (2%)
	(1989-1990)	0	1 (1%)	1 (1%)
Individual Work	(1988-1989)	3 (1%)	8 (4%)	11 (7%)
	(1989-1990)	0	12 (10%)	12 (10%)
Self instruction	(1988-1989)	1 (0%)	7 (4%)	8 (5%)
	(1988-1989)	1 (1%)	2 (2%)	3 (2%)
Other	(1988-1989)	4 (2%)	1 (0%)	5 (3%)
	(1989-1990)	1 (1%)	3 (2%)	4 (3%)

Discussion

Self-esteem and responsibility

An important set of issues concerning heterogeneous grouping revolves around the concept of self-esteem. Heterogeneous grouping seems to have had a distinctly positive impact on levels of student confidence, self-esteem and security as determined by responses relating to responsibility, student sense of integration into the heterogeneous group, a willingness to participate in classroom activities, and increased levels of independence. From teacher observation, it seemed apparent that traditionally less than successful students were in fact doing better in the classroom, despite the mix in student abilities.

Results of the survey seem to indicate that students in heterogeneously grouped classes assumed significant responsibility for their learning, and this assumption of responsibility increased over the two-year period of the program. These are difficult issues to assess; in fact, no pre- or post-test were used for determining the way that students feel about academic responsibility. Students seem to indicate from their responses to Part I: Question 1 and Part II: Questions 4, 5 that they are assuming more and more responsibility for their own learning. Student responses also indicated an emerging sense of security both in terms of integration into group situations and as individuals in heterogeneously mixed classrooms as indicated by response levels to Part I: Questions 3 and 5; and Part II: Questions 1, 7. This comfort level with group and teacher carried over into a willingness to participate in classroom activities. While the surveys do indicate that the students feel secure about the classroom and the teacher, these responses may be due, of course, to the normal and natural course of events at Oak Hill.

Learning Environment and Student/Teacher Expectations

Another major concern of the teachers involved in the heterogeneously grouped classes concerned the nature of the learning environment. The teachers who worked on the project unanimously agree that the learning environment/climate in the heterogeneous classroom was better because it provided more activity, was more student-centered, utilized different teaching strategies, employed team teaching techniques, improved collegiality through a manipulation of the schedule to dovetail English/Social Studies offerings, and was found energizing to the staff members.

Findings from student responses to the survey support these perceptions. For example, students overwhelmingly asserted that they took responsibility for their own learning, felt that their teachers were fair in evaluating them and that their teachers cared about the members of the class, as revealed in responses to questions 1,2, and 3 of Part I. In all cases over the two year sequence, a majority of the students reported that they took responsibility for their learning, that the teacher was fair in the evaluation and caring for students, and that tests reflected work done in class. Because the percentages increase and become more positive for each of the years for which the survey has been taken, a positive growth in student perception of the learning environment is indicated. This positive growth may also have been due to increased teacher preparedness; however, it is currently impossible for us to evaluate the relationship between teacher training and its impact on learning environment.

The data also details overall positive student attitudes toward the teacher expectations and format of their classes, the variety of classroom teaching techniques, and the degree to which they felt they participated in and felt a part of their classroom activities. The results of student responses to Part II: Questions 1, 2, 5, 6, 7, and 8 indicate that students are feeling positive about the kind and nature of expectations.

Student Motivation

A third important concern for heterogeneous grouping is the motivation of students within the classroom. Results of the survey seem to indicate that motivation remains positive for students over a two-year period in these heterogeneous groups. The overwhelming majority of students surveyed over two years feel that they take responsibility for their learning, participate in classroom activities, and can handle independent project and group time. By cross-analyzing results from Part I: Questions 1, 5, 7; Part II: Questions 4, 5, we are able to make some statements about what students are thinking about motivation. For example, question 5 from part I evaluates motivation levels when it makes the student self-assess their level of participation. Poorly motivated students do not participate, and yet the levels of student response are positive and indicate that students are motivated. Positive student response to independent project time also suggests a significant degree of motivation.

The data indicates that a majority of students remain motivated in heterogeneously grouped classes, possibly due to the positive learning environment created by the diverse teaching techniques employed subsequent to the implementation of the heterogeneous grouping system. It is important to note that there is no suggestion that the more highly motivated student, or those who would otherwise be tracked at the 30 level, experienced a decrease in motivation as a consequence of heterogeneous grouping.

Teaching Strategies and Techniques

One of the most surprising developments concerning the program at Oak Hill concerns teaching strategies and techniques. Teaching strategies and techniques in heterogeneous groups must provide variety, and address the varied student needs. Such needs are academic, social, and personal. One of the reasons we decided to embark on the project was to address the perceived deficiencies in student aspiration level and achievement for the mid-level student.

Some of these teaching strategies include:

1) team teaching
2) varied grouping within the classroom
3) specially and locally designed options to enhance student interaction
4) writing folder/writing process program
5) shared time between classes
6) 60-minute English classes, which include a 20-minute time slot to be potentially shared with Social Studies
7) back-to-back offering of English/Social Studies

These strategies are exhibited in questions on our survey responses. Questions 6 and 9 on Part II of the survey are a direct request concerning teacher strategies. Results from both years rate these qualities as above average or higher. The implications of such high responses over time seems to indicate that the teachers demonstrate positive qualities. In both years the percentages of students who participated in these teaching strategies and rated them average to high met or exceeded 83%. Such a significantly high rating has dramatic implications to the continued utilization of such strategies. Students seem to support the use and take an active role in implementation. Coupled with this is a student perception on Question 6 that teachers are knowledgeable in subject matter on average to high in excess of 80%. Questions 7 and 8 in Part I support the notion that students handle such strategies as independent project time and group work with a significant degree of control and value. Responses for each class exceeded 75% and imply that students are positive about these practices. Their responses call for the continuation of these techniques as practices that work for students.

An interesting development and support for using varied teaching techniques comes from an analysis of Part III, the section in which students are asked to record most frequently used techniques and most desired techniques. When the information from these tables is combined with the information from Parts I and II, an even more clear picture of the need to vary teacher techniques is derived. Over the two year sequence, students indicated the most frequently used technique to be lecture; they

also recorded lecture as the least desired technique. Similarly, they recorded classroom discussion or small group discussion as significantly less frequently used; yet they also recorded these as the most desired. An obvious conclusion from the data is that teachers are working to understand and vary classroom techniques, but they have even more program to make in this endeavor. A very simple but logical conclusion is that students do not like lecture.

In Part II, students support the class structure and format indicated by Questions 1 and 2. Students rated these items average to high in all cases (at or above 68%). They not only enjoy these, but in Question 5, 85% or more also participate in the structure. Students perceive variety in strategies used in Questions 6 and 9 in Part II, and also find in 58% or more of the cases that class material covered was relevant to their needs. This implies that teacher strategies are positively perceived by students, while the content may need to more frequently address relevant aspects of student experience.

Results of the survey lead us to conclude that students find the strategies and techniques significantly positive. Such a conclusion is supported by the students' preferred choice for teacher/student interaction in class which is explored in the final page of our survey. Students prefer a small group, non-teacher-centered approach to classroom interaction. The expansion and continuation of such strategies and techniques is critical.

A final and perhaps most important concern with our study and evaluation on heterogeneous grouping deals with the apparent gap between mid-level and upper-level students. From the data collected, there appears to be little or no perceived gap between 20 and 30 level students within the heterogeneous group. The high degree of participation and individual responsibility as well as student enjoyment of class structure point to this absence of a gap. A next step would be to continue in the evaluation process in an attempt to more adequately asses student achievement within the context of these classes. The original design of the intervention did not call for pre and post-test data, and the nonavailability of such data does impair conclusions based on achievement. Conclusions based on achievement alone, however, may do little to reflect positive attitudes toward school and toward learning.

A conclusion regarding the decreasing gap between mid-level and upper level students is indicated by several survey items. Students took a high degree of responsibility for their learning, giving a response of average to high in 80% of the cases for each subject both years. Students also perceive that the teacher cares in these classes to a significant degree. Questions 7 and 8 in Part I indicate a high degree of student acceptance of student responsibility in projects and a participation in group work, both of which mix mid-level and upper-level students. The implications of such responses suggest that a high percentage of students deal with the grouping

situation positively without feeling unduly inhibited by these grouping practices.

This conclusion is further supported by Part I, Questions 1, 4, 5, 7 and 8. Questions 1 and 4 suggest that 63% or better of the students enjoy the structure, participate in the activities, and do the required work. All numbers have increased in these areas in the second year above first year responses. Growth is occurring in this area, and perhaps this growth is significant. Not only do the students accept responsibility and enjoy doing so, but a large number, 61% or more of the students, felt they belonged in these groups and also found the material relevant.

Such a positive response to being heterogeneously grouped implies acceptance of the practice as well as an implied lessening of the gap between these two levels of students. Students also have a side benefit of acceptance of responsibility for their own learning. As we move into the third year of our study, results indicate a need for continued use of both grouping and student-directed responsibility to enhance the further integration of the traditional mid and upper level student.

Conclusions

The work which has been done over the last two years as preparation for this report has been exhausting. It is important to point out that the intervention being described and discussed has occurred with administrative support. Such support has been indicated by allowing and compensating teachers for summer work and training. An important generalized conclusion is that interventions such as we have described cannot be carried out without administrative support.

For the purposes of isolating statements to enhance discussion, we have attempted to draw from the information some specific conclusions. They include the following statements:

1. Students experienced a high degree of self-esteem in the heterogeneous groups.

2. Teachers involved in this study perceived that the self-esteem of the mid-level student was elevated.

3. Students had a positive perception of the learning environment.

4. Because the staff was involved in training and evaluation, their ability to manipulate the learning environment increased.

5. Teachers who have worked in both homogeneous and heterogeneously grouped classes prefer the latter.

6. Teachers involved in the program observed that the level of student motivation.

7. Students took responsibility for their learning in these groups.

8. Students participated in class activities with a positive perception in heterogeneous groups.

9. Teachers diversified and improved teaching strategies when teaching in heterogeneous groups. These teachers utilized practices and techniques recommended in the research consistent with students' needs for future endeavors.

10.Classes have become more student-centered, participatory and interactive.

11.Teachers have observed a decrease in the gap between the performance and stigmatized roles of the 20 and 30 level student.

Recommendations

As a result of the intervention and attendant evaluation, the teachers involved in the program submit the following recommendations.

1. Pilot a two-year study in US History of 20-30 heterogeneous groups which utilizes pre- and post-test data to judge effectiveness of heterogeneous grouping.

2. Continue the current Freshman/Sophomore program and collect additional information concerning achievement, self-esteem and motivation.

3. Disseminate information to colleagues in an attempt to heighten awareness of the program and its successes and demands.

4. Continue to develop a catalog of strategies to be utilized in heterogeneous groups, or in any teaching situation.

Perhaps it would have been advisable to conduct a pilot study before having begun the study described. Comparative data concerning the benefits of heterogeneous grouping in a rural school system does not yet exist. The group of teachers involved in the study will be looking at discipline referrals and other information in order to determine if the grouping situation has produced a change. Results of the two year study support the contention that heterogeneously grouped classes bolstered student levels of self-esteem and independence. Based on the survey results, it is clear that the vast majority of students surveyed felt comfortable and secure in the heterogeneously grouped class.

While it may be argued that all of these conditions may be attributed to simply good teaching, perhaps there is more at work than simply good teaching. The fact that these percentages are so overwhelmingly positive, and the fact that these percentages increase in the degree of the students' positive response may indicate some interesting conditions about the teaching process and the changing teaching processes that have been developing over the course of the last two years.

It is important to point out the limitations of this study. First, this is not educational research. None of the teachers involved in the study have averred that this is educational research. Second, we were at the time that the study was undertaken unable to assess the impact of heterogeneous grouping on achievement. We do not in fact have information that suggests students learn better or learn more. The teachers involved in the development, collection, and analysis of this information would disagree with the skeptics' conclusion. Not to face change in a positive way

will never lesson the impact that change brings.

Perhaps the most important conclusion about not only the study and the process involved here in the evaluation of that study is that progress can be made at the local level by a group of teachers who are committed to studying what they do and how they do it in an effort to improve teaching. Many school systems do not attempt to look carefully and closely at their teaching or administrative practices to determine impact. The teachers involved in this study have done exactly that and have learned from that process.

Resources

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